STATEMENT OF BASIS
U.S. Amines (Bucks) LLC
Bucks, Alabama
Mobile County
503-5010

On August 19, 2011, the Department received U.S. Amines' application for their Title V permit renewal. U.S. Amines' current Title V permit expired on February 19, 2012. This proposed Title V Major Source Operating Permit would be issued under the provisions of ADEM Admin. Code R. 335-3-16. The above named applicant has requested authorization to perform the work or operate the facility shown on the application and drawings, plans and other documents attached hereto or on file with the Air Division of the Alabama Department of Environmental Management, in accordance with the terms and conditions of this permit.

U.S. Amines operates a specialty chemicals manufacturing facility which is located off of Highway 43 in Bucks, Alabama. The plant is major source with respect to Title V and PSD. The major criteria pollutant emitted from this facility is Volatile Organic Compounds (VOCs).

Changes from the existing permit:

1. Addition of a dedicated Acetone to Isopropanol Reactor (TA-1701) in the No. 2 Amines Unit.
2. Addition of existing emergency fire water pumps to permit.
3. Removal of storage tanks no longer subject to regulation from permit.

No. 1 Amines Plant with Flare

The unit is controlled by a flare. The flare is not required by any regulation. The unit was built in 1975 and, therefore, predates PSD regulations. The flare controls emissions from the vent header. The vent header collects emissions from the adsorbers, strippers, distillation columns, and other miscellaneous process equipment. The presence of the flare flame is monitored continuously and the flare is equipped with an automatic re-light feature. An alarm sounds if the flame is lost.

No. 1 Amines Plant Flare (A1-01)

Emission Standards

The No. 1 Amines flare is subject to the state opacity emission limits found in 335-3-4-.01, which limits opacity to 20% for a 6 minute average. There are no specific standards for any other pollutant emitted from this unit.

Periodic Monitoring

Existing monitoring consists of continuous monitoring of the flame to ensure that the flare is in operation. Because no changes have been made to the existing process and the monitoring has proven to be sufficient, no modifications to existing monitoring were made.

No. 2 Amines Plant with Smokeless Flare

The unit is controlled by a flare. The flare controls emissions from the vent header that collects pollutants from the surge tank condenser, ammonia stripper, product column and various storage tanks. The flare also controls emissions from the comparable fuel storage tank associated with the boiler. The presence of the flare flame is continuously monitored, and the flare is equipped with an

automatic re-light feature. An alarm sounds if the flame is lost. The unit is subject to NSPS Subpart VV for equipment leaks.

No. 2 Amines Plant Flare (A2-01)

Emission Standards

There are no specific emission standards for any pollutant emitted from this unit. Although not required, the flare is typically operated at a minimum VOC destruction efficiency of 98%. This unit is subject to the New Source Performance Standard for control of Equipment Leaks in 40 CFR Part 60, Subpart VV.

Periodic Monitoring

Existing monitoring for the flare consists of continuous monitoring of the flame to ensure that the flare is in operation. Because no changes have been made to the existing process and the monitoring has proven to be sufficient, no modifications to existing monitoring were made.

Acetone Reactor TA-1701

Air Permit 503-5010-X021 was issued on July 28, 2011 for an Acetone Reactor vented to the No. 2 Amines Plant Flare. On February 13, 2012, a Temporary Authorization to Operate was issued. A Method 22 observation was performed on the No. 2 Amines Flare on May 3, 2012, while the Acetone Reactor was operating at 100%. No opacity was observed.

Emission Standards

This reactor is subject to the requirements of 40 CFR Part 60, Subpart RRR, which state that emissions from the reactor must be routed to a flare that meets §60.18. Components in VOC service on this reactor are included in the leak detection and repair program for the unit, required by 40 CFR Part 60, Subpart VV.

Periodic Monitoring

The periodic monitoring done for the flare would be sufficient to meet the requirements of 40 CFR Part 60, Subpart RRR. No additional monitoring would be required.

120.46 MMBtu/hr Natural Gas Fired Boiler

This boiler is permitted to burn Natural Gas only. The boiler was previously permitted to burn fuels that meet the minimum requirements of the "RCRA Comparable Fuels Rule" as listed in 40 CFR 261.38 and alternative fuels approved by the Department; however, the unit was never modified. On October 19, 2010 the Title V permit was modified at the request of U.S. Amines to return this section of the permit to its original condition before the modification of the permit was made.

Emission Standards

The source has accepted the following emission limits: 0.17 lb PM/MMBTU and 1.8 lb SO_2/MMBTU.

This boiler is exempt from the New Source Performance Standards found in 40 CFR Part 60, Subparts Da and Db based on the construction date of the boiler. The boiler was constructed on

January 1, 1975, and has not been reconstructed or modified since.

This boiler is subject to the state regulations for particulate emissions from fuel burning equipment found in 335-3-4-.03(1). Based on the equation found in this regulation, the emission limit would be 0.17 lb/MMBTU. This limit would be inherently satisfied by the requirement that the boiler fire only natural gas.

This boiler is subject to the state regulations for Sulfur Dioxide emissions from fuel burning equipment found in 335-3-5-.01(1)(a), which requires that SO_2 emissions not exceed 1.8 lb/MMBTU. This limit would be inherently satisfied by the requirement that the boiler fire only natural gas.

Periodic Monitoring

There would be no periodic monitoring required for this unit.

Storage Tanks

Emission Standards

Storage tanks TA-1911 and TA-1840 were previously listed as being subject to 40 CFR Part 60 Subpart Kb. Tank TA-1911 is a 500,000-gallon storage tank that previously stored Dibutylamine, which has a vapor pressure of 0.0616 psia. This vapor pressure is less than Subpart Kb's required vapor pressure of 3.5 kPa (0.507 psia) for a tank larger than 151 m^3 (39,890 gallons). Tank TA-1911 is now listed as storing Acetone, which is not a volatile organic compound (VOC), and is therefore not subject to Subpart Kb. Tank TA-1840 is a 200,000-gallon tank listed as storing cyclohexylamine, which has a vapor pressure of 0.014 psia. Tank TA-1840 is greater than 151 m^3 but stores a VOC liquid with a vapor pressure less than 3.5 kPa. Therefore, neither tank is subject to 40 CFR Part 60, Subpart Kb and will be removed from the Title V.

Three Emergency Diesel Powered Fire Water Pumps

The facility has three emergency diesel fire water pumps that have the potential to fall under 40 CFR Part 63, Subpart ZZZZ. The three fire water pumps are for emergency purposes only. Two of the pumps are rated at 285 horsepower (hp) and were installed in 1972. The third pump is rated at 320 hp and was installed in 1985. All three pumps are Compression Ignition (CI) 4-stroke Reciprocating Internal Combustion Engines (RICE).

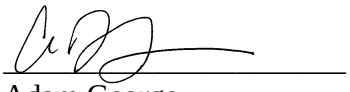
Since the fire water pumps are for emergency purposes only, are existing engines (installed prior to June 12, 2006), and are combustion ignition, the only portion of 40 CFR Part 63, Subpart ZZZZ they are subject to is §63.6640(f).

Emission Standards

The fire water pumps are subject to ADEM Admin. Code 335-3-4-.01(1)(a and b) which states the pumps may not emit an opacity greater than 20%, as determined by a 6-minute average, except for one 6-minute period per 60-minute period where they are not allowed to emit an opacity greater than 40%.

Compliance Assurance Monitoring (CAM)

This facility is not subject to the provisions of 40 CFR Part 64, Compliance Assurance Monitoring (CAM) because none of the permitted units utilizes a control device to comply with an emission limitation or standard.



Adam George
Industrial Chemicals Section
Chemical Branch
Air Division

May 8, 2012

File ID: 2656 503-5010 097 05-08-2012 T5SOB ADG 2012 RENEWAL